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10/581,953

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EXAMINER

AMAKWE, TAMRA L

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/581,953	Applicant(s) YOKOCHI ET AL.	
	Examiner TAMRA L. AMAKWE	Art Unit 1781	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05/07/11.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-18,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-18,20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/17/11, 11/18/11</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The prior 112 rejections are only withdrawn based on the amended claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-18, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,514,624 to Takemoto in view of US 6,641,926 to Malina et al.

Per instant claim 13: Takemoto teaches a decorative material comprising a surface layer comprising a surface layer-side impregnated paper layer with a cured (crosslinked) thermosetting resin (substrate 1, FIG. 2 and associated text, patented claim 1). Takemoto further teaches a blocking layer that is formed on an entire surface of the surface layer (sealer 4). See at least 3:15-35, 6:40-50, 6:49-68, and 7:1-33. Takemoto also teaches a surface resin layer disposed on the blocking layer comprising a cured material of an ionizing radiation curing resin (protective layer 3). See at least 4:10-5:10.

Takemoto doesn't teach a base material layer comprising or having disposed on it, a base material layer-side impregnated paper layer or impregnated with a cured thermosetting resin. However, Takemoto teaches the decorative material composite may be adhered to wood-based substrates (7:60-8:25).

In the analogous art of decorative materials, Malina teaches any number of impregnated cured resin papers (base material layer having a base material layer-side impregnated paper layer with a cured thermosetting resin and/or base material layer having a base material layer-side impregnated paper layer paper disposed on the uppermost surface of the base layer) including and showing at least two said papers below the substrate in FIG. 2 for balancing, adhesion, and warpage. Depending upon the application, the numbers of impregnated paper sheets are varied. See at least Abstract, and 13:1-60.

It would have been obvious to one having ordinary skill in the art to have modified the bottom impregnated paper (Applicant's surface layer-side impregnated paper layer) of Takemoto by supplying an additional impregnated paper underneath the composite as taught by Malina for balancing, adhesion, and warpage as discussed above. Further, the amount of variation is dependent upon the end application as taught by Malina cited above and as suggested by Takemoto discussed in detail above.

Takemoto doesn't disclose the ionizing radiation curing resin composition as claimed in lines 17-19 of claim 13. However Takemoto discloses ionizing radiation curing resin comprising monomers as a mixture of two or more using acrylate and ethylene oxide polymerizable compounds. See cols. 4-5. Specifically 4:20-32, 4:32-56, 5:15-25, and 6:1-30.

While mass ratio is not taught, the ingredients are disclosed. Such ingredients produce a ready to crosslink composition for protective purposes. It would have been obvious to one having ordinary skill in the art to have modified the ionizing radiation curing resin as claimed in order to have a protective feature as taught by Takemoto.

Claims 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,514,624 to Takemoto in view of USPN 6,641,926 to Malina et al. and further in view of USPN 4,339,566 to Rosenkranz et al. and further in view of US 6,103,352 to Takahashi et al.

The prior art does not teach that the surface resin layer comprises the cured material of the ionizing radiation curing resin comprising an alkylene oxide modified polymerizable compound

Rosenkranz teaches a two component urethane acrylate impregnating resin (2: 31-42) comprised of alkylene oxides, such as ethylene oxide (3:1-33) in the B component for impregnating to strengthen textile webs and coloring purposes. See at least the Abstract.

It would have been obvious to one having ordinary skill in the art to have modified the ionizing radiation curing resin of the surface resin layer in the decorative material of the combination to include or substitute a urethane acrylate resin comprising ethylene oxide as claimed because Rosenkranz teaches a two component urethane resin as claimed assists as an impregnate used in webs for strengthening and coloring purposes (Abstract, 2: 31-42, 3:1-33).

The prior art does not teach a chain number n of an ethylene oxide repeated unit in an ethylene oxide modified portion of the ethylene oxide modified *polymerizable* compound is within the of 2 to 20.

Takahashi teaches in a surface protective layer, a chain number n of an ethylene oxide repeated unit in an ethylene oxide modified portion of the ethylene oxide modified *polymerizable* compound is within the of 2 to 20 in Example 4 (see Bisphenol A having 20 parts by weight diacrylate (average molecular weight 500, and number of functional groups 2)).

It would have been obvious to one having ordinary skill in the art to have modified the ionizing radiation curing resin of the surface resin layer in the decorative material of the combination to include or substitute a chain number n of an ethylene oxide repeated unit in an ethylene oxide modified portion of the ethylene oxide modified *polymerizable* compound is within the of 2 because Takahashi teaches this compound is great for use in a similar surface protective layer.

Re claim 14: Takemoto teaches, a pattern ink layer (2, FIG. 2 and associated text) between both a surface resin layer 3 and blocking layer 4.

Re claim 15: Takemoto teaches, a pattern ink layer (2, FIG. 2 and associated text) between both a surface layer-side impregnated paper layer (surface layer 1) and blocking layer (primer 5).

Re claim 16: For prior art purposes, the Examiner interprets the blocking layer, if there are at least two blocking layers, in the following ways (See A) and B) below):

A) The blocking layer of Takemoto comprises a layer separately formed on the upper surface of the surface layer. The sealer layer (4) is separately formed on the upper surface of the surface layer. See at least patented claim 1, 4:10-5:10, 6:49-68, 7:55-65 and FIG. 2.

B) Should the blocking layer be three layers, the blocking layer comprises: A) a layer separately formed on the upper surface of the surface layer (sealer 4), B) a surface resin layer impregnated with a blocking resin (surface resin layer 3), and C) a layer formed by impregnating said surface resin layer with a blocking resin). Regarding C), because surface resin layer (3) is impregnated with a blocking resin, the blocking resin forms a layer formed by impregnating the surface resin layer within (3). See at least patented claim 1, 6:49-68, 7:55-65 and FIG. 2.

Re claim 17: For prior art purposes, if the pattern ink layer is between a surface resin layer and blocking layer separately formed on the upper surface of surface layer, the interpretation is as follows:

Takemoto teaches, a pattern ink layer (2, FIG. 2-3 and associated text) between both surface resin layer 3 and blocking layer 4. See at least 4:10-5:10.

Re claim 17: For prior art purposes, if the pattern ink layer is between a blocking layer separately formed on the upper surface of the surface layer and the layer formed by impregnating the surface resin layer with a blocking resin, the interpretation is as follows:

Takemoto teaches the pattern ink layer 2 is between blocking layer 4 and the layer within 3 formed by impregnating the surface resin layer with a blocking layer (see claim 16 rationale B) above).

Re claim 18: Takemoto teaches the blocking layer comprises a cured material of a two component curing type (first and second two pack resins) urethane resin. See at least 6:60-7:35, patented claim 1, 4:10-5:10, 6:49-68, 7:55-65 and FIG. 2.

Re claim 20: Takemoto teaches a substrate adhered to a bottom portion of the base material layer of the decorative material. See at least 7:63-8:20.

Re claim 21: Takemoto teaches the blocking layer comprises a cured material of a two component curing type (first and second two pack resins) urethane resin. See at least 6:60-7:35, patented claim 1, 4:10-5:10, 6:49-68, 7:55-65 and FIG. 2.

Reference of Interest

US 6,162,264 to Miyazaki et al. teaches at col. 32, lines 55-68 impregnating inside surfaces of sheets to migrate into other porous sheets (like claim 6).

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

Applicant argues the previous 112 2nd paragraph rejection. However, the claims are still confusing as set forth above. Applicant argues the clarity of claim 13 in line 14 to the resin, however, the fact that the resin may be the same, does not read clear in the claim itself. Inserting the word independent in Claim 16 does not make the claim clearer. For instance everything after line 4 in claim 16 is not clear. It doesn't add anything to the claim to describe that the independent impregnated blocking layer is independent from another layer(s). This adds to the confusion. It is still not clear how many layers are present.

Applicant argues Takemoto doesn't teach the irradiation resin as now claimed having the chain number from 2 to 20. However, the new reference teaches this. All other applied references are used for similar reasons as set forth above, in view of the new reference. All other arguments are moot in view of the new ground of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TAMRA L. AMAKWE whose telephone number is (571)272-1519. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see at least <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art Unit 1781

TAMRA L. AMAKWE
Examiner
Art Unit 1781